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**P-39 Metallic and insulating interfaces of amorphous SrTiO<sub>3</sub>-based oxide heterostructures**

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The conductance confined at the interface of complex oxide heterostructures provides new opportunities to explore nanoelectronic as well as nanoionic devices. Herein we show that metallic interfaces can be realized in SrTiO<sub>3</sub>-based heterostructures with various insulating overlayers of amorphous LaAlO<sub>3</sub>, SrTiO<sub>3</sub> and yttria-stabilized zirconia films. On the other hand, samples of amorphous La<sub>7/8</sub>Sr<sub>1/8</sub>MnO<sub>3</sub> films on SrTiO<sub>3</sub> substrates remain insulating. The interfacial conductivity results from the formation of oxygen vacancies near the interface, suggesting that the redox reactions on the surface of SrTiO<sub>3</sub> substrates play an important role.

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